

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Small, *et al.*

Confirmation No.: 7442

Serial No.: 10/568,077

Art Unit: 3723

Filed: February 13, 2006

Examiner: To Be Assigned

For: **PERIODIC ACID COMPOSITIONS FOR
POLISHING RUTHENIUM/LOW K SUBSTRATES (AS
AMENDED)**

Attorney Docket No: 063254-0203-US

PETITION UNDER 37 C.F.R. § 1.47(a)

Mail Stop Petition

U.S. Patent and Trademark Office
Randolph Building – Customer Service Window
401 Dulany Street
Alexandria, Virginia 22314

Sir:

This Petition is submitted pursuant to 37 C.F.R. §1.47(a) and forms a portion of Applicants' concurrently filed response to the Notification of Missing Requirements dated October 18, 2006. The subject application names the following joint inventors: Robert J. Small, Kenichi Orui, Steve Aragaki, Atsushi Hayashida, and Haruki Nojo. However, Mr. Nojo has refused to sign the Declaration. Therefore, the remaining joint inventors respectfully petition the U.S. Patent and Trademark Office to permit the filing of the subject application on behalf of themselves and on behalf of Mr. Nojo. All inventors except Mr. Nojo have executed a Declaration pursuant to 37 C.F.R. §1.63, a copy of which is attached to the response noted above, and Applicants request that this Declaration be accepted as a declaration made on behalf of Mr. Nojo pursuant to 37 C.F.R. §1.64. Submitted with this petition are declarations by Mr. Kenichi Orui and Mr. Laba Karki attesting to the facts surrounding Mr. Nojo's refusal to execute the Declaration.

A petition under 37 C.F.R. §1.47(a) requires (i) proof that the non-signing inventor has either

refused to sign or is unavailable, (ii) the last known address of the non-signing inventor, and (iii) payment of the petition fee under 37 C.F.R. §1.17(g). Each of these requirements has been satisfied and is discussed below.

A. Facts Relating to Inventor's Refusal to Sign

The following facts evidencing Mr. Haruki Nojo's refusal to sign the Declaration are supported by the aforementioned declarations of Mr. Kenichi Orui and Mr. Laba Karki, attached hereto as Exhibits 1 and 2 and referred to as the "Orui Declaration" and the "Karki Declaration," respectively. The following is a summary of the pertinent facts recited in these declarations .

Dr. John Dodd and Dr. Phillippe Chelle have patent liaison responsibilities for DA Nanomaterials ("DANM"), the assignee of the subject application. On November 15, 2006, Mr. Karki forwarded to them a copy of the Notice of Missing Requirements for the subject application along with 1) a Power of Attorney; 2) an Inventor Declaration; and 3) an Assignment form for execution by the inventors. *See* Karki Declaration, para. 2.

Mr. Karki called Dr. Chelle on December 22, 2006 to ascertain the status of the Declaration. Dr. Chelle stated that the Declaration had been forwarded in November 2006 to the inventors [Robert SMALL; Haruki NOJO; Kenichi ORUI; Steve ARAGAKI; Atsushi HAYASHIDA] at DANM located in Japan. The next day, December 23, 2006, Mr. Karki received an email message from Dr. Chelle stating that it was going to be difficult to get a signature from Mr. Nojo because Mr. Nojo had left DANM. *See* Karki Declaration, para. 4.

On January 5, 2007, Mr. Karki sent an email message directly to Mr. Kenichi Orui (one of the named inventors at DANM in Japan), reminding him of the upcoming first extension due date of January 18, 2007 and requesting return of the executed declaration at his earliest convenience. *See* Karki Declaration, para. 5 and Orui Declaration, para. 4. On that same day, Mr. Mashimoto (manager of DANM business in Japan) responded to Mr. Karki via email stating that Mr. Nojo had left the employ of DANM. *See* Karki Declaration, para. 6 and Orui Declaration, para. 3.

On January 9, 2007 Mr. Kenichi Orui sent Mr. Karki an email message stating that he was attempting to contact Mr. Nojo in regard to obtaining his signature on the Declaration. *See* Karki Declaration, para. 8 and Orui Declaration, para. 4. Specifically, Mr. Orui attempted to contact Mr. Nojo

via telephone on the following dates: January 9, 2007; January 15, 2007; January 22, 2007; February 1, 2007; February 16, 2007; and March 12, 2007. *See* Orui Declaration, para. 6. Mr. Orui also tried to contact Mr. Nojo via email on the following dates: January 15, 2007; January 22, 2007; February 1, 2007; and March 12, 2007 respectively. *See* Orui Declaration, para. 6. But Mr. Orui did not receive any response. *See* Orui Declaration, para. 4.

On February 2, 2007 Debbie Schultz, a patent secretary for Mr. Karki, sent an email message to Mr. Kenichi Orui stating that she had received the executed documents from all of the inventors except Mr. Nojo. Ms. Schultz asked whether the Declaration from Mr. Nojo would be forthcoming shortly. *See* Karki Declaration, para. 9. On February 5, 2007 Mr. Kenichi Orui replied to Ms. Schultz by stating that he would try to obtain Mr. Nojo's signature before the next extended due date for response. *See* Karki Declaration, para. 10.

On March 12, 2007, Mr. Orui sent a copy of the subject patent application, including the Declaration and Assignment forms, to Mr. Nojo at his residential address: 440 Kurami, Samukawa Machi, Koisa-gun, Kanagawa-ken 253-0101. *See* Orui Declaration, para. 8. As of May 8, 2007 Mr. Orui has not received the signed declaration from Mr. Nojo. *See* Orui Declaration, para. 6. Also, on March 30, 2007 Mr. Karki sent a cover letter (*see* Karki Declaration, Attachment 1) and a copy of the subject application and the Declaration to Mr. Nojo. *See* Karki Declaration, para. 12. These documents were sent by overnight Federal Express on March 30, 2007. *See* Karki Declaration, para. 12. A Federal Express tracking report indicated that the package was successfully delivered (*see* Karki Declaration, Attachment 2). The package also included a return Federal Express envelope (*see* Karki Declaration, Attachment 3) in which Mr. Nojo could easily return the executed Declaration. *See* Karki Declaration, para. 12. As of May 17, 2007 the executed Declaration of Mr. Nojo has not been received by Mr. Karki. *See* Karki Declaration, para. 13.

It is clear that the application and Declaration were sent to Mr. Nojo multiple times. In addition, multiple attempts by multiple people were made to contact Mr. Nojo regarding this matter with no success. Therefore, it is evident that Mr. Nojo has received a copy of the subject application and the Declaration and is refusing to execute and return the Declaration.

B. Statement of Last Known Address

Mr. Haruki Nojo's last known address is 440, Kurami, Samukawa Machi, Koisa-gun, Kanagawa-ken 253-0101.

C. Conclusion and Payment of Fee

Applicants submit that Mr. Haruki Nojo's conduct constitutes a refusal to sign the Declaration as evidenced by the above statement of facts and the Declarations of Mr. Karki and Mr. Mashimoto. The Commissioner is hereby authorized to charge the requisite fee pursuant to 37 C.F.R. § 1.17(g) for this Petition and any additional fees required for this Petition to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310. An additional copy of this sheet is enclosed for accounting purposes. Accordingly, all of the requirements for this Petition under 37 C.F.R. §1.47(a) have been satisfied, and the grant of this Petition is respectfully requested.

Respectfully submitted,

Date: May 17, 2007

Customer No. 09629

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

Phone: (202) 739-3000

Facsimile: (202) 739-3001

Direct: (202) 739-5590



Laba Karki, Ph.D.

55,317

Reg. No.

Attorney Docket Number 063254-0203-US
Application Number 10/568,077

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Small, *et al.*

Confirmation No.: NA

Serial No.: 10/568,077

Art Unit: NA

Filed: August 12, 2004

Examiner: To be assigned

For: *Periodic Acid Compositions For Polishing
Ruthenium/Low K Substrates*

Attorney Docket No: 063254-0203-US

EXHIBIT 1 TO THE PETITION UNDER 37 C.F.R. § 1.47(a)

**DECLARATION OF KENICHI ORUI
IN SUPPORT OF
PETITION UNDER 37 C.F.R. § 1.47(a)**

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, KENICHI ORUI, declare that:

1. I am employed by Dupont Air Products NanoMaterials K.K. ("DANM") in Japan as a research engineer.
2. I am a joint inventor in this subject patent application identified above.
3. Mr. Haruki Nojo is no longer working at DANM. He left DANM on September 30, 2005.
4. Pursuant to an email request from Morgan Lewis Attorney, Laba Karki, which I received on January 5, 2007, I attempted to contact Mr. Haruki Nojo to obtain his signature on the Inventor Declaration and Assignment forms. Specifically, I attempted to contact Mr. Nojo several times via telephone on the following dates: January 9, 2007; January 15, 2007; January 22, 2007; February 1, 2007; February 16, 2007; and March 12, 2007. I also tried to contact him via email

Attorney Docket Number 063254-0203-US
Application Number 10/568,077

on the following dates: January 15, 2007; January 22, 2007; February 1, 2007; and March 12, 2007 respectively. But, I did not receive any response from Mr. Haruki Nojo.

5. On March 12, 2007, I had a copy of the above patent application including the Declaration and Assignment forms sent to Mr. Haruki Nojo at his residential address: 440 Kurami, Samukawa Machi, Koisa-gun, Kanagawa-ken 253-0101.

6. As of May 8, 2007 I have not received a return telephone call from Mr. Nojo, nor have I received the signed Inventor Declaration.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that all statements made by me herein are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any willful false statements may jeopardize the validity of any patent resulting therefrom.

Date:

5/15/07

Respectfully submitted,

Kenichi Orui

Kenichi Orui
D A Nanomaterials K.K.
KSP R&D D340, 3-2-1, Sakado,
Takatsu-ku, Kawasaki,
Kanagawa, 213-0012 Japan

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Small, *et al.*

Confirmation No.: NA

Serial No.: 10/568,077

Art Unit: NA

International Application No. PCT/US04/25913

Filed: August 12, 2004

Examiner: To Be Assigned

For: *Periodic Acid Compositions For Polishing
Ruthenium/Low K Substrates*

Attorney Docket No: 063254-0203-US

EXHIBIT 2 TO THE PETITION UNDER 37 C.F.R. § 1.47(a)

**DECLARATION OF LABA KARKI
IN SUPPORT OF
PETITION UNDER 37 C.F.R. § 1.47(a)**

U.S. Patent and Trademark Office
Randolph Building – Customer Service Window
401 Dulany Street
Alexandria, Virginia 22314
MAIL STOP – MISSING PARTS

Sir:

I, LABA KARKI, declare that:

1. I am a patent attorney registered before the U.S. Patent and Trademark Office (USPTO) having registration number 55,317 and I represent Dupont Airproducts NanoMaterials LLC (“DANM”) in the prosecution of the above subject patent application.

2. On November 15, 2006 I sent a letter to Dr. John Dodd, a patent liaison for DANM, forwarding him the notice of Missing Parts along with 1) a Power of Attorney; 2) an Inventor Declaration; and 3) An assignment form to be executed by the listed inventors in the above patent application. Copies of these documents were sent to Dr. Philippe Chelle, a patent liaison for DA Nanomaterials at Tempe, Arizona.

3. I called Dr. Phillipe Chelle on December 22, 2006 regarding obtaining the declarations from all the inventors. He stated that the declarations had been forwarded to the Japanese inventors at DANM in Japan in November 2006.

4. The next day, December 23, 2006 I received an email message from Dr. Phillipe Chelle stating that it was going to be difficult to get signature from Mr. Nojo because Mr. Nojo had left DANM.

5. On January 5, 2007 I sent an email message to Mr. Kenichi Orui, a co-inventor of this subject application, at DANM Japan, reminding him of the upcoming first extension due date of January 18, 2007 and asking him to return the executed declarations at his earliest convenience.

6. On that same day, January 5, 2007 Mr. Mashimoto responded to me via email stating that Mr. Nojo had left DANM.

7. On January 6, 2007 I replied to Mr. Mashimoto and requested that he send Mr. Nojo a copy of the application and the declarations at his last known address.

8. On January 9, 2007 Mr. Kenichi Orui sent me an email stating that he was trying to contact Mr. Nojo via telephone and email in regard to obtaining his signatures.

9. On February 2, 2007 Debbie Schultz, a patent secretary at Morgan Lewis, sent an email message to Mr. Kenichi Orui stating that she had not received the executed documents from Mr. Nojo. Additionally, she inquired whether the declaration from Mr. Nojo was forthcoming shortly.

10. On February 5, 2007 Mr. Kenichi Orui replied to Ms. Schultz stating that he would try to receive the signature from Mr. Nojo by the next due date.

11. On March 7, 2007 Mr. Tadashi Mashimoto sent me an email message stating that they were still struggling to obtain Mr. Nojo's signature. He stated that they sent some emails and left voice messages on Mr. Nojo's cell phone, but they did not receive a reply from Mr. Nojo. He also stated that they decided to send the letter to his private address asking him to sign the document.

12. On March 30, 2007 I wrote a letter (attached as Attachment 1) directly to Mr. Nojo requesting his signature on the declaration and assignment forms to be signed by him including a copy of the published PCT application WO 2005/019364 to his current address: 440, Kurami, Samukawa Machi, Koisa-gun, Kanagawa-ken 253-0101. I sent this letter and the formal documents via FEDEX express mail tracking number 738618855536. Attached herewith is the delivery

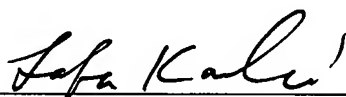
confirmation dated April 2, 2007 (attached as Attachment 2). I also included a pre-paid return FEDEX envelope and mailing label for his convenience to return the executed documents via Fedex (attached as Attachment 3).

13. As of this date, May 17, 2007 I have not received the executed declaration and assignment forms from Mr. Nojo.

14. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that all statements made by me herein are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that any willful false statements may jeopardize the validity of any patent resulting therefrom.

Respectfully submitted,

Date: May 17, 2007



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C O U N S E L O R S A T L A W

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Associate
202-739-5590
lkarki@morganlewis.com

March 30, 2007

VIA FEDEX

Mr. Haruki Nojo
440, Kurami, Samukawa Machi,
Koisa-gun, Kanagawa-ken 253-0101
JAPAN

Re: U.S. Patent Application Serial No. 10/568,077 to SMALL et al.
(based on PCT/US/2004/025913)
Title: **Periodic Acid Compositions for Polishing
Ruthenium/Low K Substrates**
Our Reference: 063254-0203-US EKC-241

Dear Nojo-san:

We are writing to you to request your signature on the enclosed inventor Declaration and the Assignment document for the U.S. application referenced above, which claims priority to the published PCT WO 2005/019364 application. Also enclosed are a copy of a Notice of Missing Parts received in the above-referenced U.S. patent application, and a copy of the published PCT application WO 2005/019364.

Our next response is due on *April 18, 2007* with four months extension of time. The final due date is *May 18, 2007*. Our colleagues at DA Nanomaterials LLC in Japan have attempted to contact you without success, so we are taking this opportunity to kindly request your signature on these documents. We would appreciate your cooperation in signing and dating the Declaration and the Assignment document. We have included a self-addressed Fedex envelope for your convenience and would appreciate your prompt assistance in this matter.

Should you have any questions, please do not hesitate to contact us.

Very truly yours,


Laba Karki, Ph.D.

Enclosures

cc: Dr. John Dodd
Ms. Bonnie Crossland
David Owens, Esq.

ATTACHMENT 2

Tracking number	738618855536	Reference	70679-063254-0203 LK
Signed for by	N.OUJOU	Destination	/JCH
Ship date	Mar 30, 2007	Delivered to	KANGAWA-KEN JP
Delivery date	Apr 2, 2007 10:12 AM	Service type	Receptionist/Front Desk
		Weight	Priority Envelope 0.9 lbs
Status	Delivered		

Date/Time	Activity	Location	Details
Apr 2, 2007 10:12 AM	Delivered	KANGAWA-KEN JP	
Apr 1, 2007			

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Phone ()

Company MORGAN LEWIS & BOCKIUS LLP

Address 1111 PENNSYLVANIA AVE NW

WASHINGTON

State DC ZIP 20004-2541

2 Your Internal Billing Reference

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10

Recipient's Name LABA KARAKI Phone (202) 739-5791

DocId: 3421739-5791

Morgan Lewis & Bockius LLP

Recipient's Address 1111 PENNSYLVANIA AVE NW.
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1. **Problema 1** (10 puntos) Se tiene un sistema de ecuaciones lineales en forma matricial $AX = B$, donde A es una matriz cuadrada de orden n y B es un vector columna de orden n . Se sabe que A es invertible. ¿Cuál es la solución del sistema?